

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: HELMUT RUDIGIER

Serial No.: 09/594,170

Filed: JUNE 15, 2000

Title: SWITCH FOR THE OPTICAL SWITCHING OF A LIGHT PATH



PRELIMINARY AMENDMENT

**Box Missing Parts**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to substantive examination of the referenced application, please amend the application as follows.

IN THE SPECIFICATION:

Please amend the specification as follows:

Page 1, between the title and the first paragraph, insert the following heading --BACKGROUND AND SUMMARY OF THE INVENTION--.

Page 8, between lines 4 and 5, insert the following heading --BRIEF DESCRIPTION OF THE DRAWINGS--.

Page 9, between lines 2 and 3, insert the following heading --DETAILED DESCRIPTION OF THE DRAWINGS--.

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**IN THE ABSTRACT:**

Please delete the Abstract in its entirety and substitute the new ABSTRACT OF THE DISCLOSURE enclosed herewith.

**IN THE CLAIMS:**

Please amend the claims as follows:

1. (Amended) Switch for the optical switching of a light path, particularly for switching the entering of light into a fiber-optical light guide, the switch having at least one mirror surface for reflecting the light, [for establishing the mirror surface,] a support being equipped with a reflective layer for establishing the mirror surface, [characterized in that] wherein the support is a glass body.

2. (Amended) Switch according to Claim 1, [characterized in that] wherein the mirror element [(7)] comprising the at least one mirror surface [(7', 7'')] and the glass body is cut out of a glass plate provided with at least one reflective layer.

3. (Amended) Switch according to Claim 1 [or 2], [characterized in that] wherein the glass body [or the glass plate] is provided on both sides with a reflective layer [(7', 7'')].

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4. (Amended) Switch according to [one of the preceding claims, characterized in that] Claim 1, wherein the glass body [or the glass plate] has a thickness of approximately 0.02 to 0.7 mm, particularly of approximately 0.1 to 0.5 mm.

5. (Amended) Switch according to [one of the preceding claims, characterized in that] Claim 1, wherein the reflective layer [(7', 7'')] is applied to the support by means of a vacuum coating method which is known per se.

6. (Amended) Switch according to [one of the preceding claims, characterized in that] Claim 1, wherein the reflective layer [(7', 7'')] is constructed as a highly reflective layer, preferably made of Au, Ag or Al.

7. (Amended) Switch according to [one of the preceding claims, characterized in that] Claim 1, wherein the reflective layer [(7', 7'')] is protected by a protective layer.

8. (Amended) Switch according to Claim 7, [characterized in that] wherein the protective layer is essentially formed of  $\text{SiO}_2$ ,  $\text{SiO}_x$ ,  $\text{MgF}_2$ ,  $\text{ThF}_4$  or similar stable hard dielectric oxides, nitrides or fluorides.

9. (Amended) Switch according to Claim 7 [or 8],  
[characterized in that] wherein the protective layer can be  
produced by a vacuum technique.

10. (Amended) Switch according to [one of the preceding  
claims, characterized in that] Claim 1, wherein the support  
having the reflective mirror surface (7', 7'') is arranged on a  
switch body (8).

11. (Amended) Switch according to Claim 10,  
[characterized in that] wherein the switch body [(8)] has a shaft  
or a shaft bore [(9)] for its swivellability.

12. (Amended) Switch according to Claim 10 [or 11],  
[characterized in that] wherein the switch body [(8)] is produced  
from a material which can be cast or injection molded.

13. (Amended) Switch according to [one of Claims 10 to 12,  
characterized in that] Claim 10, wherein the support is arranged  
on [the] an essentially cuboid-shaped switch body [(8)] in a  
surface-flush manner in a recess [(8b)].

14. (Amended) Switch according to [one of Claims 10 to 12,  
characterized in that] Claim 10, wherein the support is inserted

at [the] an essentially cuboid-shaped switch body [(8)] approximately at [the] a level of medium deepness, preferably in a form closure.

15. (Amended) Switch according to [one of Claims 10 to 14, characterized in that] Claim 10, wherein the support projects from the switch body [(8)] approximately in the manner of a lug.

16. (Amended) Switch according to [one of Claims 10 to 15, characterized in that the] Claim 10, wherein support is glued to the switch body [(8)].

Please ADD the following new claims 17-31:

--17. Switch according to Claim 2, wherein the glass body is provided on both sides with a reflective layer.

18. Switch according to Claim 2, wherein the glass body has a thickness of approximately 0.02 to 0.7 mm, particularly of approximately 0.1 to 0.5 mm.

19. Switch according to Claim 3, wherein the glass body has a thickness of approximately 0.02 to 0.7 mm, particularly of approximately 0.1 to 0.5 mm.

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20. Switch according to Claim 2, wherein the reflective layer is applied to the support by means of a vacuum coating method which is known per se.

21. Switch according to Claim 17, wherein the reflective layer is constructed as a highly reflective layer, preferably made of Au, Ag or Al.

22. Switch according to Claim 17, wherein the reflective layer is protected by a protective layer.

23. Switch according to Claim 2, wherein the support having the reflective mirror surface is arranged on a switch body.

24. A method of making a switch for the optical switching of a light path, particularly for switching the entering of light into a fiber-optical light guide, the switch having at least one mirror surface for reflecting the light, a support being equipped with a reflective layer for establishing the mirror surface, wherein the support is a glass body,

said method comprising forming the support by cutting a glass body out of glass plate provided with at least one reflective layer.

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25. A method of making a switch according to Claim 24, wherein the glass body is provided on both sides with a reflective layer.

26. A method of making a switch according to Claim 24, wherein the glass body has a thickness of between .02mm and 0.7mm.

27. A method of making a switch according to Claim 26, wherein the glass body has a thickness of between 0.1mm and 0.5mm.

28. A method of making a switch according to Claim 24, wherein the reflective layer is constructed as a highly reflective layer, preferably made of Au, Ag or Al.

29. A method of making a switch according to Claim 28, wherein the reflective layer is protected by a protective layer.

30. A method of making a switch according to Claim 29, wherein the protective layer is essentially formed of  $\text{SiO}_2$ ,  $\text{SiO}_x$ ,  $\text{MgF}_2$ ,  $\text{ThF}_4$  or similar stable hard dielectric oxides, nitrides or fluorides.

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31. A method of making a switch according to Claim 24, wherein the support having the reflective mirror surface is arranged on a switch body.--

**REMARKS**

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #622HE/48982).

November 13, 2000

Respectfully submitted,



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-- ABSTRACT OF THE DISCLOSURE

A switch for the optical switching of a light path, particularly for switching the entering of light into a fiber-optical light guide is provided. The switch dial has at least one mirror surface for reflecting the light and, for establishing the mirror surface, a support is equipped with a reflective layer, which support is constructed as a glass body.--